

MEANINGFUL MEASUREMENT

The Role of Assessments in Improving High School Education in the Twenty-First Century

June 2009

© 2009 Alliance for Excellent Education. All rights reserved.

Suggested citation:

L. M. Pinkus, ed., *Meaningful Measurement: The Role of Assessments in Improving High School Education in the Twenty-First Century* (Washington, DC: Alliance for Excellent Education, 2009).

Ordering information:

Copies of *Meaningful Measurement: The Role of Assessments in Improving High School Education in the Twenty-First Century* can be downloaded from the Alliance's website at www.all4ed.org. To request print copies of the report, please visit http://www.all4ed.org/publication_material/order_form. The first copy of the report is complimentary. Additional copies are available at a charge of \$1 per copy to cover shipping and handling costs.

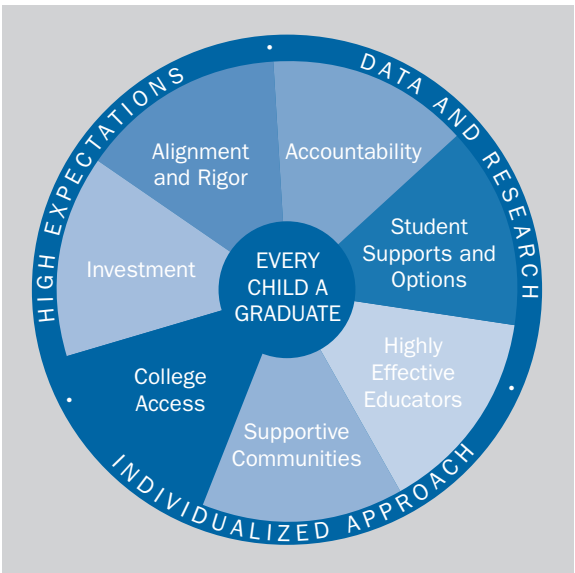
About the Alliance for Excellent Education

The mission of the Alliance for Excellent Education is to promote high school transformation to make it possible for every child to graduate prepared for postsecondary learning and success in life.

The Alliance for Excellent Education is a national policy and advocacy organization, based in Washington, DC, working to improve national and federal policy so that all students can achieve at high academic levels and graduate high school ready for college, careers, and citizenship in the twenty-first century.

The Alliance has developed a “Framework for Action to Improve Secondary Schools” that informs a set of federal policy recommendations based on the growing consensus of researchers, practitioners, and advocates about the challenges and solutions for improving secondary student learning.

The framework, shown graphically here, encompasses seven policy areas that represent key leverage points in ensuring a comprehensive, systematic approach to improving secondary education. The framework also captures



three guiding principles that apply to all of the policy areas. Although the appropriate federal role varies from one issue area to another, they are all critically important to reducing dropouts and increasing college and career readiness.

About the Editor

Lyndsay M. Pinkus is director of strategic initiatives at the Alliance for Excellent Education. Since joining the Alliance in January 2002, she has served in a variety of research, coordination, and advocacy roles, where her work has included managing policy and grant work on a range of issues including graduation rates, data, secondary school accountability, and secondary school improvement, and authoring a number of publications for the Alliance. Prior to rejoining the staff in January 2006, Ms. Pinkus served as a legislative associate at Washington Partners, LLC, providing government relations and policy research and analysis for a variety of clients, including the Alliance. She is a graduate of the School of Public Affairs at American University as a presidential scholar; the Public Affairs and Advocacy Institute at the Center for Congressional and Presidential Studies; and the Institute for Educational Leadership's Education Policy Fellowship program.

Acknowledgments

The Alliance for Excellent Education is greatly appreciative of the authors for sharing their time and expertise in writing the following chapters, as well as of the multiple Alliance staff members and advisors whose dedication contributed significantly to this volume.

The Alliance for Excellent Education is also grateful to Carnegie Corporation of New York for the financial support that made this publication possible.

The views expressed in this volume are those of the authors and do not necessarily represent those of the Alliance for Excellent Education or the funder.

CHAPTER



Formative Assessment and Assessment for Learning

Jan Chappuis, Stephen Chappuis, and Richard Stiggins
ETS Assessment Training Institute

As our nation seeks to improve learning for all students, there is increased demand for assessment information to use in data-driven decisionmaking at all levels of the education system—state, district, and classroom. Educators and policymakers are now called upon to establish balanced assessment systems designed to meet the information needs at each level. Such a system includes *annual assessments* designed to allow schools, school systems, and communities to judge the impact of the educational experiences on student learning, for accountability and other purposes. It includes *interim assessments* used across classrooms to identify standards that students are struggling to master and to provide a focus for instructional and program improvement. And it includes *classroom assessments* designed both to support student learning and to measure their achievement. Within this balanced assessment system are classroom assessment practices that inform daily instruction, known as *formative assessment*, whose purpose is to provide the detailed achievement information that teachers and students can act on every day to improve learning.

In 1998, British researchers Paul Black and Dylan Wiliam published a comprehensive review of research on formative assessment practices, in which they concluded, “Innovations that include strengthening the practice of formative assessment produce significant and often substantial learning gains.”¹ Their review examined studies that collectively encompassed kindergartners to college students; represented a range of subject areas including reading, writing, social studies, mathematics, and science; and were conducted in numerous countries throughout the world, including the United States. The gains reported in the studies they describe are among the largest found for any educational intervention: the achievement gains realized by students whose teachers relied on formative assessment practices ranged from 15 to 25 percentile points, or two to four grade equivalents, on commonly used standardized achievement test score scales. In broader terms, this kind of score gain, if applied to performance on international assessments, would move the United States’s rank from the middle of the pack of the forty-two nations tested to the top five. An additional outcome common among the studies they analyzed is that certain formative assessment practices greatly increased the achievement of low-performing students, in some cases to the point of approaching that of high-achieving students.

Black and Wiliam’s report in large part triggered the current widespread interest in formative assessment: over the last ten years educators and policymakers alike have become aware of the need to support its use. But along with increased awareness has come increased confusion about what “counts” as formative assessment and how to develop educators’ capacity to use assessment formatively. This chapter will describe the characteristics of formative assessment, with a particular focus on those formative assessment practices that engage and empower students in their own learning, or *assessments for learning*. It will also describe challenges related to the effective use of formative assessment and recommended actions for policymakers.

Confusion about the Meaning of “Formative Assessment”

Recently a school leader asked an assessment expert for an example of a good test item on a formative assessment and then for an example of how that item might look when used on a summative test. He wanted to explain to his staff the difference between formative and summative assessment.

His end goal was for teachers to develop assessments to measure how well students were mastering the content standards on the state accountability test before the test was given in the spring. But he knew that formative assessment had been shown to improve achievement, so he wanted to make sure they were using formative items.

His question reflects the uncertainty with which many educators, school leaders, and policymakers approach formative assessment. It isn't surprising: the assessment landscape is broad and populated with multiple, sometimes conflicting definitions of formative assessment. As a result, practices labeled as formative assessment in schools today vary widely.

What is formative assessment?

It is helpful to begin with an understanding of what is and what isn't formative assessment. For many experts in the field, formative assessment is not an *instrument* or an *event*, but a collection of practices with a common feature: *they all lead to some action that improves learning*. Well-known educational researchers emphasize this point when they describe what is at the heart of formative assessment:

- “Formative assessment, therefore, is essentially feedback ... both to the teachers and to the pupil about present understanding and skill development in order to determine the way forward.”²
- “[Formative assessment] refers to assessment that is specifically intended to provide feedback on performance to improve and accelerate learning.”³
- “Formative assessment is defined as assessment carried out during the instructional process for the purpose of improving teaching or learning ... What makes formative assessment formative is that it is immediately used to make adjustments so as to form new learning.”⁴

The Council of Chief State School Officers, as part of its advocacy for formative assessment, has developed the following definition: “Formative assessment is a process used by teachers and students during instruction

that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.”⁵

The common thread woven throughout formative assessment research, articles, definitions, and books bears repeating: it is *not the instrument* that is formative; it is the *use of the information* gathered, by whatever means, *to adjust teaching and learning*, that merits the “formative” label.

At the classroom level, teachers assess formally through tests, quizzes, assignments, performances, projects, and surveys, or informally through questioning and dialogue, observing, and anecdotal note taking. In any of these instances, they may or may not be engaged in formative assessment: the determining factor is not the type of assessment they use, but rather how they and their students use the information.

What is summative assessment?

When the information from an assessment is used solely to make a judgment about the level of competence or achievement, it is a *summative assessment*. In the classroom, an assessment is summative when it is given to determine how much students have learned at a particular point in time, for the purpose of communicating achievement status to others. The communication usually takes the form of a symbol, a letter grade, a number, or a comparison to a standard such as “meets the standard” or “proficient” that is reported to students and eventually to parents.

At the program level, an assessment is summative when results are used to make judgments such as determining how many students are and are not meeting standards in a certain subject, or to evaluate the effectiveness of a particular curriculum or instructional model. The data may be reported to educators within the system, the school board, and the community.

Summative assessments aren't bad or wrong; they're just not formative. They have a different purpose: to report out level of achievement. Mislabeling them as formative, or using summative assessment information in formative ways, will not generate the achievement gains realized in formative assessment research studies.

The growing field of “formative assessment”

Not surprisingly, a plethora of programs and products described as “formative” assessment has surfaced, due in part to the achievement gains and gap-closing powers reported by Black and Wiliam and other researchers.

One cause of growth in this segment of the assessment field is an indirect result of implementation of the No Child Left Behind (NCLB) legislation of 2001. Recent years have seen a dramatic increase in quantity and frequency of student testing—much of it voluntary and well beyond the requirements of federal law or state assessment systems. For example, many schools and districts administer *benchmark*, *short-cycle*, or *interim assessments* to predict student performance on high-stakes tests, to identify students needing additional help, and to isolate those standards students struggle with most. This use of testing has contributed to the widening scope of what is loosely called formative assessment.

Additionally, testing companies in the K–12 education market, seeking to support and profit from the trend toward more testing, sometimes advertise products as “formative assessments.” As a result, the adjective *formative* now appears in the titles of many commercially prepared tests and item banks. This adds to the confusion by implying that it is the test itself that is formative.⁶ In reality, these off-the-shelf assessments may be little more than a series of mini summative tests, not always tightly aligned to what was taught in the classroom.

These developments in the assessment field have implications for those seeking to support formative assessment practices. Are all of the tests and practices labeled as “formative” truly formative? Most importantly, what is it about *formative* that gives it its power? What led to the gains these researchers uncovered?

Importance of Assessment Purpose: The Use of Results

Almost any assessment instrument or event can be used for summative or formative purposes. But some assessments are *by design* better suited to summative use and others to formative use. For example, state assessments, although they may have some limited formative use, are constructed to

provide accountability data and to compare schools and districts. Because their primary purpose is summative, by design the results often do not communicate in detail about individual student strengths and weaknesses. Further, the results are often delivered months after the administration of the tests. Therefore, such state tests usually do not function well in a formative way: they are of limited use diagnostically because they cannot contribute meaningfully to guide day-to-day instruction or help determine the next learning steps of the individual students who generated the data.

Benchmark assessments, either purchased by the district from commercial vendors or developed locally, are generally meant to measure progress toward state or district content standards and to predict future performance on large-scale summative tests. Such assessments are sometimes intended for formative use, to guide further instruction for groups or individual students, but teachers' and administrators' lack of understanding of how to use the results can derail this intention. The assessments will produce no formative benefits if teachers administer them, report the results, and then continue with instruction as previously planned—as can easily happen when teachers are expected to cover a hefty amount of content in a given time.

Teachers also select or develop their own summative assessments—those that count for a grade. Compared with state and district tests, these classroom assessments can more readily be adapted to formative use because their results are more immediately available and their learning targets have been more recently taught. When teachers know what specific learning target each question or task on their test measures, they can use the results to select and reteach portions of the curriculum that students haven't yet mastered. Carefully designed common assessments can be used this way as well.

Students, too, can use summative test results to make decisions about further study. If the assessment items are explicitly matched to the intended learning targets, teachers can guide students in examining their right and wrong responses to answer questions such as these:

- What are my strengths relative to the standards?
- What have I seen myself improve or get better at?

- Where didn't I perform as desired, and how might I make those answers better?
- What do these results mean for the next steps in my learning, and how should I prepare for that improvement?

For students to make maximum use of these questions to guide further study, however, teachers must plan and allow time for students to learn the knowledge and skills they missed on the summative assessment and then to retake it. Lack of time for such learning is a big hindrance to formative use of summative classroom assessments.

Necessary conditions

The examples cited above began with summative purposes in mind. And the achievement gains credited to formative assessment practices will not materialize unless certain conditions are met—and at least some of these conditions are often *not* met by assessments whose primary purpose is summative. The conditions are as follows:

1. The assessment instrument or event is designed so that it aligns directly with the content standards to be learned.
2. All of the instrument or event's items or tasks match what has been or will be taught.
3. The instrument or event provides information of sufficient detail to pinpoint specific problems, such as misunderstandings, so that teachers and students can make good decisions about what actions to take.
4. The results are available in time for educators to take action with the students who generated them.
5. Teachers and students do indeed take action based on the results.

If one or more of these conditions is not fulfilled, it is at best an incomplete attempt at formative assessment, with diminishing returns the farther one strays from the conditions. Assessment does not accomplish a formative purpose when “the information is simply recorded, passed on to a third party who lacks either the knowledge or the power to change the outcome, or is too deeply coded (for example, as a summary grade given by the teacher) to lead to appropriate action.”⁷

Figure 1: Formative or Summative?				
Type of assessment	What is the purpose?	Who will use the information?	How will it be used?	Is the use formative or summative?
State test	Measure level of achievement on state content standards	State	Determine AYP	Summative
		District, teacher teams	Determine program effectiveness	Summative
	Identify percentage of students meeting performance standards on state content standards	State	Comparison of school/districts	Summative
		District, teacher teams	Develop programs/interventions for groups or individuals	Formative
District benchmark, interim, or common assessment	Measure level of achievement toward state content standards	District, teacher teams	Determine program effectiveness	Summative
		District, teacher teams	Identify program needs	Formative
	Identify students needing additional help	District, teacher teams, teachers	Plan interventions for groups or individuals	Formative
Classroom assessment	Measure level of achievement on learning targets taught	Teachers	Determine report card grade	Summative
	Diagnose student strengths and areas needing reteaching	Teacher teams, teachers	Revise teaching plans for next year/semester	Formative
			Plan further instruction/differentiate instruction for these students	Formative: Assessment for Learning
		Teachers, students	Provide feedback to students	Formative: Assessment for Learning
	Understand strengths and areas needing work	Students	Self-assess, set goals for further study/work	Formative: Assessment for Learning

Program = curriculum, texts/resources, and pedagogy

Source: Adapted with permission from J. Chappuis, *Seven Strategies of Assessment for Learning* (Portland, OR: ETS Assessment Training Institute, 2009), p. 8.

The table in Figure 1 lists the types of assessments typically present in school systems in the United States, describes their intended uses, and identifies the uses as formative or summative.

What Gives Formative Assessment Its Power?

The studies Black and Wiliam⁸ examined represent a diverse array of interventions, all of which featured some formative use of assessment data or processes. Practices yielding the largest achievement gains displayed the following characteristics:

- use of classroom discussions, classroom tasks, and homework to determine the current state of student learning/understanding, with action taken to improve learning/correct misunderstandings;
- provision of descriptive feedback, with guidance on how to improve, during the learning; and
- development of student self- and peer-assessment skills.

Drawing from their analysis of these studies, Black and Wiliam⁹ make the following recommendations about key components of formative assessment:

- “Opportunities for students to express their understandings should be designed into any piece of teaching, for this will initiate the interaction through which formative assessment aids learning.”
- “The dialogue between pupils and teachers should be thoughtful, reflective, focused to evoke and explore understanding, and conducted so that all pupils have an opportunity to think and to express their ideas.”
- “Feedback to any pupil should be about the particular qualities of his or her work, with advice on what he or she can do to improve, and should avoid comparison with other pupils.”
- “Feedback on tests, seatwork, and homework should give each pupil guidance on how to improve, and each pupil must be given help and an opportunity to work on the improvement.”

- “If formative assessment is to be productive, pupils should be trained in self-assessment so that they can understand the main purposes of their learning and thereby grasp what they need to do to achieve.”

Notice where these recommended practices fall on the table in Figure 1—they are the cells labeled “assessment *for* learning.” Formative assessment *is* a powerful tool in the hands of both teachers and students, and the closer it is to everyday instruction, the stronger it is. Classroom assessment, sensitive to what teachers and students are doing daily, is most capable of providing the basis for understandable and accurate feedback about the learning, while there is still time to act on it. And it has the greatest capacity to develop students’ ability to monitor and adjust their own learning.

Formative assessment in teachers’ hands

Many formative assessment strategies address the teacher’s information needs, helping to answer questions critical to good instruction:

- Who is and who is not understanding the lesson?
- What are this student’s strengths and needs?
- What misconceptions do I need to address?
- What feedback should I give students?
- What adjustments should I make to instruction?
- How should I group students?
- What differentiation do I need to prepare?

There is no doubt that, acting on good information during the course of instruction, teachers can increase what and how well students learn. Indeed, some of the significant achievement gains attributable to formative assessment are due to enhanced questioning and dialogue techniques.

Many strong programs and practices help teachers obtain, interpret, and act on student achievement information. However, if the discussion of formative assessment considers only teachers’ use of assessment information, one very important player is sitting on the sidelines, and it’s not the principal or the superintendent—we have benched the student.

Formative assessment in students' hands: Assessment for learning

Black and Wiliam's¹⁰ research review showcases the student as decisionmaker. Many other prominent education experts have also described the benefits of student involvement in the assessment process. In an often-cited article describing how formative assessment improves achievement, D. Royce Sadler¹¹ concludes that it hinges on developing students' capacity to monitor the quality of their own work during production:

The indispensable conditions for improvement are that the *student* comes to hold a concept of quality roughly similar to that held by the teacher, is able to monitor continuously the quality of what is being produced *during the act of production itself*, and has a repertoire of alternative moves or strategies from which to draw at any given point.

Writing about formative assessment in the science classroom, Atkin, Black, and Coffey¹² translate the conditions Sadler describes into three questions:

1. Where are you trying to go? (identify and communicate the learning and performance goals);
2. Where are you now? (assess, or help the student to self-assess, current levels of understanding); and
3. How can you get there? (help the student with strategies and skills to reach the goal).

Sadler's conditions as represented in these three questions frame what is called "assessment *for* learning"—a collection of formative assessment practices designed to meet students' information needs, maximizing both motivation and achievement by involving students from the start in their own learning.¹³ Those practices, summarized below, illustrate how the formative assessment research recommendations play out in the hands of a knowledgeable classroom teacher.

Practices designed to answer the question, "Where am I going?":

- **Provide students with a clear and understandable vision of the learning target.** Motivation and achievement both increase when instruction is guided by clearly defined targets. Activities that help

students answer the question, “What’s the learning?” set the stage for all further formative assessment actions.

- **Use examples and models of strong and weak work.** Carefully chosen examples of the range of quality can create and refine students’ understanding of the learning goal by helping students answer the questions, “What defines quality work?” and “What are some problems to avoid?”

Practices designed to answer the question, “Where am I now?”:

- **Offer regular descriptive feedback.** Effective feedback shows students where they are on their path to attaining the intended learning. It answers for students the questions, “What are my strengths?”; “What do I need to work on?”; and “Where did I go wrong and what can I do about it?”
- **Teach students to self-assess and set goals.** The information provided in effective feedback models the kind of evaluative thinking we want students to be able to do themselves. Teaching students to identify their strengths and weaknesses and to set goals for further learning prepares them to generate their own answers to the questions, “What am I good at?”; “What do I need to work on?”; and “What should I do next?”

Practices designed to answer the question, “How can I close the gap?”:

- **Design lessons to focus on one learning target or aspect of quality at a time.** When assessment information identifies a need, teachers can adjust instruction to target that need. They scaffold learning by narrowing the focus of a lesson to help students master a specific learning goal or to address specific misconceptions or problems.
- **Teach students focused revision.** When a concept, skill, or competence proves difficult for students, teachers can structure practice in smaller segments, and give them feedback on just the aspects they are practicing. This allows students to revise their initial work with a focus on a manageable number of learning targets or aspects of quality.

- **Engage students in self-reflection, and let them keep track of and share their learning.** Long-term retention and motivation increase when students look back on their journey, reflecting on their learning and sharing their achievement with others.

The practices described above constitute actions that strengthen students' sense of self-efficacy (belief that effort will lead to improvement), their motivation to try, and, ultimately, their achievement.

Formative assessment and assessment for learning

Effective formative assessment, then, is comprised of both teacher and student actions. When teachers assess student learning for formative purposes, the intent is not to generate a final grade for the paper or the grade book. Rather, the assessment event serves as practice for students, developing and refining their mastery of the intended learning goals. Formative assessment that includes assessment *for* learning enhances achievement in two ways:

- teachers can adapt instruction on the basis of evidence, making changes that will benefit learning immediately; and
- students can use evidence of their current progress to actively manage and adjust their own learning.¹⁴

This is a use of assessment information that differs from the traditional practice of associating *assessment* with *test*, and *test* with *grade*. It is a broader vision of what assessment is and what it is capable of accomplishing. Taken together, these are the practices that research studies indicate will cause significant achievement gains, with the largest gains coming for the lowest achievers.

What Does Formative Assessment Measure?

Visualize a ladder with a state standard resting on top; those students who get to the top have mastered that standard. Formative assessment tells teacher and student where the student is on the ladder leading to the top at any point in time. With this information, they can team up to determine what comes next in that student's learning. The rungs on the ladder

represent the daily targets of instruction, the foundations of knowledge, reasoning, performance skills, and product development capabilities that students must master as they ascend over time to academic competence as reflected in the standard at the top. Where students are in their learning changes day to day, and their current status is best captured through ongoing and accurate classroom assessment.

Implementing Effective Formative Assessment

It is important to keep in mind that formative assessment is a human process that involves teachers and students generating information and acting on it to improve learning. Its effective use hinges on the assessment literacy of educators: classroom teachers must be able to select, modify, or create accurate assessments as needed during the course of instruction, adhering to standards of quality.¹⁵ The authors of this chapter, in collaboration with others, developed a set of five standards, called “Indicators of Sound Classroom Assessment Practice,” that describe what teachers need to know and be able to do with respect to classroom assessment. The first three standards ensure accuracy of the assessment information:

- **Clear Purpose:** Teachers must know how to use assessment processes and results to meet the information needs of all users.
- **Clear Targets:** Teachers must be able to establish clear learning targets for students.
- **Sound Design:** Teachers must be able to translate learning targets into assessments that yield accurate results.

The last two standards ensure effective use of the assessment information:

- **Effective Communication:** Teachers must manage assessment results well and communicate them effectively to all stakeholders.
- **Student Involvement:** Teachers must actively engage students in generating, interpreting, and acting on their own assessment information.

**Figure 2: Indicators of Sound Classroom Assessment Practice—
What Teachers Need to Know and Be Able to Do**

<p>1) Clear Purpose Use assessment processes and results to meet information needs of all intended users.</p>	<ul style="list-style-type: none"> • Understand who the users of classroom information are and how to meet their information needs. • Understand the relationship between assessment and student motivation and craft assessment experiences to maximize student engagement. • Use classroom assessment processes and results formatively, to plan next steps in learning. • Use classroom assessment results summatively to communicate students' levels of achievement at a point in time. • Know how to balance summative and formative uses of assessment information.
<p>2) Clear Targets Establish clear and valued student learning targets.</p>	<ul style="list-style-type: none"> • Establish clear learning targets for students; know how to turn broad content standards into classroom-level targets. • Understand the types of learning targets students are to achieve. • Create a comprehensive plan over time for assessing learning targets formatively and summatively.
<p>3) Sound Design Translate learning targets into assessments that yield accurate results.</p>	<ul style="list-style-type: none"> • Know what the four assessment methods are and when to use each. • Select, modify, or design assessments that serve different purposes. • Select, modify, or design assessments that reflect intended learning targets. • Write assessment questions of all types well. • Sample learning appropriately. • Avoid sources of mismeasurement that bias results.
<p>4) Effective Communication Manage assessment results well and communicate them effectively.</p>	<ul style="list-style-type: none"> • Record, summarize, and translate assessment information into a grade accurately. • Select the best reporting option for the context. • Interpret and use standardized test results correctly. • Communicate assessment information to students effectively. • Communicate assessment information to parents, colleagues, and other stakeholders effectively.
<p>5) Student Involvement Engage students in generating, interpreting, and acting on their own assessment information.</p>	<ul style="list-style-type: none"> • Make learning targets clear to students. • Involve students in assessing and setting goals for their own next steps. • Involve students in tracking, reflecting on, and communicating about their learning.

Source: Adapted with permission from R. J. Stiggins, J. Arter, J. Chappuis, and S. Chappuis, *Classroom Assessment for Student Learning: Doing It Right—Using It Well* (Portland, OR: ETS Assessment Training Institute, 2004), p. 27.

Knowledge of both assessment accuracy and effective use are necessary conditions to implementing formative assessment; if the assessment itself yields inaccurate information, no judgments or actions based on its results are likely to improve learning. Yet, up to this time, as a nation we have not invested in developing classroom assessment competencies. Few teachers are prepared to meet these standards of classroom assessment practice, because they have not been given the opportunity to do so. As a result, student progress is in jeopardy of daily mismeasurement, thus compromising instructional decisions students, teachers, and parents make on a regular basis—students’ understanding of their learning capabilities, teachers’ diagnoses of learning needs, and communication to parents and others about student progress.

The educational leader’s role in the use of formative assessment

Leadership at the school and district level is crucial to the implementation of sound assessment practices. Building leaders’ essential role is comprised of four key actions:

- monitoring assessment quality, including assessment *for* learning practices;
- facilitating department-wide and building-wide collaboration;
- contributing to development of supportive school policies; and
- ensuring professional development to strengthen classroom assessment expertise.

All those who supervise teachers can use the Indicators of Sound Classroom Assessment Practice formally through classroom observations and follow-up conversations and informally through discussions to monitor teachers’ knowledge and use of high-quality assessment practices. If they are to provide meaningful feedback to teachers on these subjects, principals and other supervisors must be able to differentiate between sound and unsound practices, and must be committed to deepening their own learning if they are not masters of the indicators themselves. Principals can hold regularly scheduled faculty discussions of formative assessment actions to center collaborative action on using assessment in ways that impact learning beyond final report card grades and test data analysis.

In addition, school leaders should be able to develop and implement school policies that contribute to sound assessment practice and also help achieve a balanced assessment system in the school and district. These include communication policies and practices regarding grading, reporting student progress, and communicating about the variety of school assessments and their relationship to improving curriculum and instruction.

Leaders at the district level are responsible for creating balanced assessment systems, including provisions for the effective use of formative assessment. By developing comprehensive assessment plans that address the information needs of all users of assessment results, district leaders can lay the groundwork for quality at all levels. Along with aligning their local assessment system with the state assessment system, they can ensure that sound classroom assessment practices are considered integral to teaching well in their districts. They can also make the professional development needed to assess well at all levels of schooling a priority district-wide.

Leaders should also be able to plan for, pace, and facilitate or monitor the professional development teachers need to become knowledgeable about accurate and effective assessment practices. That responsibility leads directly into the challenges ahead.

Challenges to implementation

The most significant challenge is that of ensuring that educators are prepared to assess accurately and to use assessment to support learning. Unfortunately, few states explicitly include competence in assessment as a requirement to be licensed to teach. Teacher licensing examinations do not yet verify competence in classroom assessment. Building- and district-level leaders lack the assessment competencies needed to build balanced, instructionally helpful local assessment systems. Assessment literacy training remains minimal in the majority of pre-service teacher and educational administration programs.

Second, the universal lack of pre-service training is exacerbated by similar weaknesses in support for working educators: a focus on assessment competencies is not prominent among in-service professional development offerings. Increasingly, teachers do receive training on the interpretation and

use of data, particularly related to their district- and state-level assessments. But the attention needed at the classroom level is overshadowed by the need to succeed on accountability tests. However, some states (Vermont, Delaware, West Virginia, Ohio, Illinois, South Carolina, and Kentucky) and districts (Clark County SD, Naperville SD, Olentangy SD, and Poway SD) have initiated professional development in-service programs aimed at helping teachers improve classroom assessment.

As a result of inadequate pre-service and in-service training for teachers and leaders, the United States currently relies on a national faculty still largely untrained in the principles of sound classroom assessment. The result can be and often is unsound school- and district-level assessment policies, inappropriate evaluations of teachers' assessment practices, a lack of resources for teachers to learn to assess productively, and poor advice to noneducation policymakers, such as school board members and legislators. What is perhaps most unfortunate about this is that it need not be this way: there are known strategies for raising the level of assessment literacy for K–12 teachers and prospective teachers—effective professional development resources and programs now exist that can help close that gap.

The third challenge is the tendency to bypass professional development in the area of classroom assessment altogether—to teacher-proof the assessment-related parts of instruction—by importing “formative” assessment instruments from outside the classroom. When the classroom teacher's assessment responsibilities are circumvented, albeit unknowingly, it severely limits the student achievement gains attainable through developing teachers' assessment literacy and knowledge of how to make assessment and instruction work together.

The fourth challenge lies in current national assessment policies characterized by the limiting belief that assessment's sole purpose is to measure student performance, coupled with an assumption that improving the quality of annual summative tests will serve to improve schools. Sixty years and billions of dollars later, district, state, and national tests have not produced the magnitude of school improvement expected, especially for low-achieving students.

This is because of the flaw in the theory. Annual summative tests may serve important and valued accountability purposes, but they are limited in their ability to inform instructional decisions. The power to impact the truly crucial decisions that affect teaching and learning resides with the other 99.9 percent of the assessments that occur in a student's academic career—those conducted by teachers in classrooms on a daily basis.

Improving the assessment practices in our classrooms and schools is hard work, particularly while large-scale accountability testing dominates assessment discussions. Until local, state, and federal policymakers better understand sound assessment practices and the limitations of large-scale assessment, and allocate resources to balance large-scale accountability testing with the effective use of high-quality interim and classroom assessments, the nation's students will not achieve at high levels.

Recommended Actions for Policymakers

The challenges faced in bringing better assessment practices to the classroom are ultimately an issue of balance: the nation's education stakeholders need help in understanding and creating comprehensive, *balanced* assessment systems, as described in the opening of this chapter.

Federal policymakers can help overcome the challenges described, thus assisting schools to move toward the effective use of formative assessment. This includes bringing national visibility to the importance of formative assessment practices in improving teaching and learning, and acknowledging that the use of such assessments is an expectation teachers and principals have not been adequately prepared to meet. Specific federal policy action could include

- supporting the implementation of balanced assessment systems and the improvement of both quality and effective use of classroom assessment;
- encouraging state efforts to improve pre-service policies that improve future teachers' and school leaders' assessment literacy; this issue is directly related to teacher quality, and if acted upon would make a contribution that so far has been largely absent;

- requiring the use of federal professional development dollars to include activities designed to improve educators' formative assessment practices;
- calling for the allocation of other resources to prepare teachers and school leaders to use assessment in support of learning for all students; and
- supporting educational research that continues to inform what formative assessment practices contribute most to raising student achievement.

Education policy and practice at any level that leads to a steady diet of ready-made external tests will not bring about the gains in student achievement promised by formative assessment practices. Such external tests cannot substitute for the daily formative assessment practices that only assessment-literate educators are able to conduct. The greatest value in formative assessment lies in teachers and students making use of results to improve real-time teaching and learning at every turn.

(Portions of this paper are adapted from S. Chappuis and J. Chappuis, “The Best Value in Formative Assessment,” *Educational Leadership* 65, no. 4 [2007]: 14–19; and J. Chappuis, *Seven Strategies of Assessment for Learning* [Portland, OR: ETS Assessment Training Institute, 2009].)

The views expressed in this chapter are those of the authors and do not necessarily represent those of the Alliance for Excellent Education.

About the Authors

Jan Chappuis has been an elementary and secondary classroom teacher, a curriculum and classroom assessment specialist, and a professional development specialist. She has worked for the past eight years with the ETS Assessment Training Institute in Portland, Oregon. She is the author of *Seven Strategies of Assessment for Learning* (2009) and *Learning Team Facilitator Handbook* (2007), and the coauthor of *Creating and Recognizing Quality Rubrics* (2006), *Classroom Assessment for Student Learning: Doing It Right—Using It Well* (2004), *Assessment FOR Learning: An Action Guide for School Leaders* (2005), and *Understanding School Assessment—A Parent and Community Guide to Helping Students Learn* (2002).

Stephen Chappuis's career as a teacher, counselor, and building and district administrator in public school districts spans twenty-eight years. His experience includes being a junior high principal, a senior high principal, and assistant superintendent for curriculum and instruction. In the latter role he implemented a standards-based instructional program that included comprehensive assessment plans and policies with professional development for teachers in classroom assessment. As executive director of the ETS Assessment Training Institute, he works with school leaders to develop assessment literacy and balanced local assessment systems. He has written for *Education Week*, *Educational Leadership*, and *School Administrator*, and is the coauthor of *Classroom Assessment for Student Learning: Doing It Right—Using It Well* (2004), *Assessment FOR Learning: An Action Guide for School Leaders* (2005), and *Understanding School Assessment—A Parent and Community Guide to Helping Students Learn* (2002).

Richard Stiggins founded the Assessment Training Institute (ATI) in 1992 to provide professional development in classroom assessment for educators. Throughout his career, he has brought his expertise in educational measurement to bear on supporting teachers and administrators in their preparation to meet the task demands of accurate classroom assessment used in service of student learning. He is the author of numerous articles and books and the coauthor of *Classroom Assessment for Student Learning: Doing It Right—Using It Well* (2004) and *Assessment FOR Learning: An Action Guide for School Leaders* (2005).

¹ P. Black and D. Wiliam, "Inside the Black Box: Raising Standards Through Classroom Assessment," *Phi Delta Kappan* 80 (October 1998): 140.

² W. Harlen and M. James, "Assessment and Learning: Differences and Relationships Between Formative and Summative Assessment," *Educational Assessment: Principles, Policy and Practice* 4, no. 3 (1997): 365–79, p. 369.

³ D. R. Sadler, "Formative Assessment: Revisiting the Territory," *Assessment in Education* 5, no. 1 (1998): 77–84, p. 77.

⁴ L. A. Shepard, "Formative Assessment: Caveat Emptor," in *The Future of Assessment: Shaping Teaching and Learning*, ed. C. Dwyer, 279–303 (New York: Lawrence Erlbaum Associates, 2008), p. 281.

⁵ "Mission and History of the Formative Assessment for Students and Teachers SCASS," www.CCSSO.org (accessed March 9, 2009).

⁶ S. Chappuis, "Is Formative Assessment Losing Its Meaning?" *Education Week* 24, no. 44 (2005).

⁷ D. R. Sadler, "Formative Assessment and the Design of Instructional Systems," *Instructional Science* 18, no. 2 (1989): 119–44.

⁸ P. Black and D. Wiliam, "Assessment and Classroom Learning," *Educational Assessment: Principles, Policy and Practice* 5, no. 1 (1998): 7–74; Black and Wiliam, "Inside the Black Box."

⁹ Black and Wiliam, "Inside the Black Box."

¹⁰ Black and Wiliam, "Assessment and Classroom Learning."

¹¹ Sadler, "Formative Assessment and the Design of Instructional Systems," p. 121, italics in original.

¹² J. M. Atkin, P. Black, and J. Coffey, *Classroom Assessment and the National Science Standards* (Washington, DC: National Academy Press, 2001), questions on p. 14.

¹³ R. J. Stiggins, J. Arter, J. Chappuis, and S. Chappuis, *Classroom Assessment for Student Learning: Doing It Right—Using It Well* (Portland, OR: ETS Assessment Training Institute, 2004).

¹⁴ Ibid.

¹⁵ Ibid.